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TA-12 CNC Drilling and Tapping Centre





Digima TA-12 CNC drilling and tapping centre – automated metal machining, 12 spindles and HUST CNC control

CNC Drilling and Tapping Centre



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TA-12 CNC Drilling and Tapping Centre

Horizontal CNC Centre for Drilling, Tapping, Milling and Machining Metal Components

Digima TA-12 is a modern CNC drilling and tapping centre designed for serial and medium-batch production. The machine is intended for machining metal components, especially those made of brass, aluminium, copper and sanitary fitting components.

The machine construction is based on a rigid cast-iron base, while milling, drilling and tapping processes are performed in CNC mode. The enclosed protective housing increases operator safety, reduces noise, dust and coolant splash, while the automation system reduces production labour requirements.

12

Rotary Head

12 spindles

5.5

Spindle Servo Motor Power

5.5 kW

ER40

Spindle Interface

ER40

0.008

X/Y/Z Axis Repeatability

0.008 mm

High Automation, 12-Spindle Head and Precision CNC Machining.

The TA-12 combines HUST CNC control, servo drives, automatic central lubrication, a full enclosure and rapid tool changing in the spindle turret.

Product Photos

Images and Details of the TA-12 Drilling and Tapping Centre

The gallery presents the main machine components: external view, working area, rotary head, machine base, linear guideways, ball screw and technical views. Seven image cards have been included to allow one more image than in the previous code.



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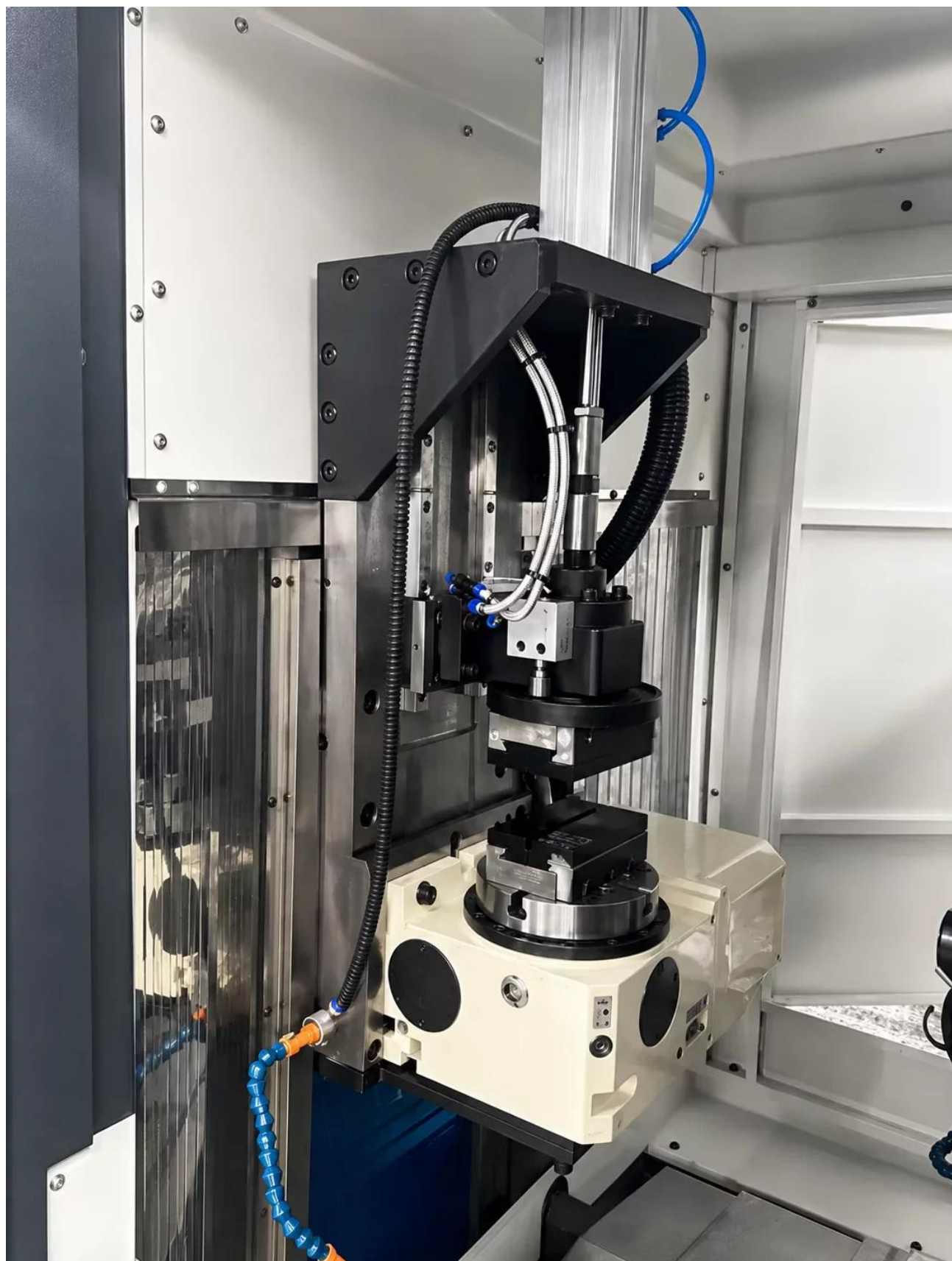




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Main View of the TA-12 Drilling and Tapping Centre

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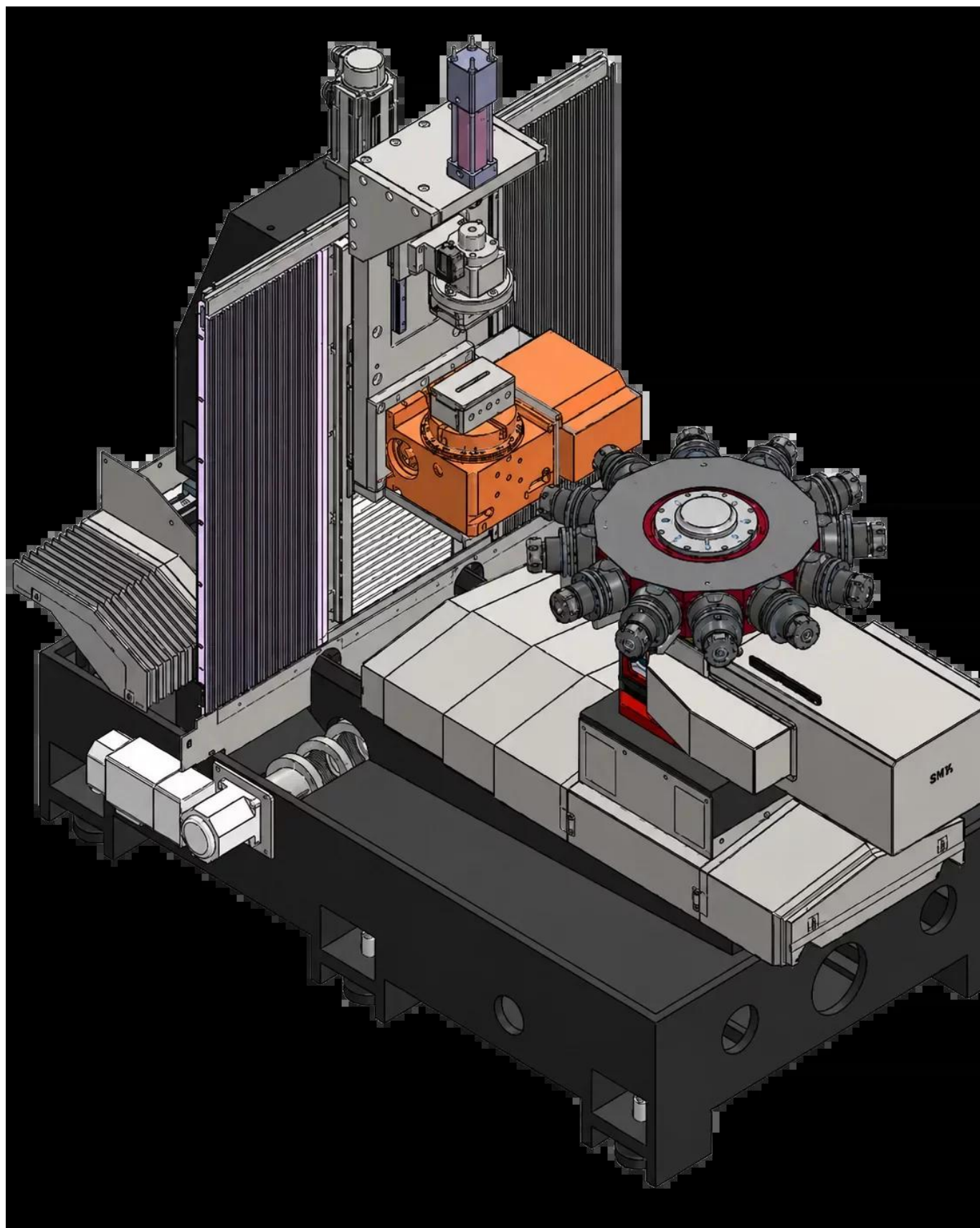




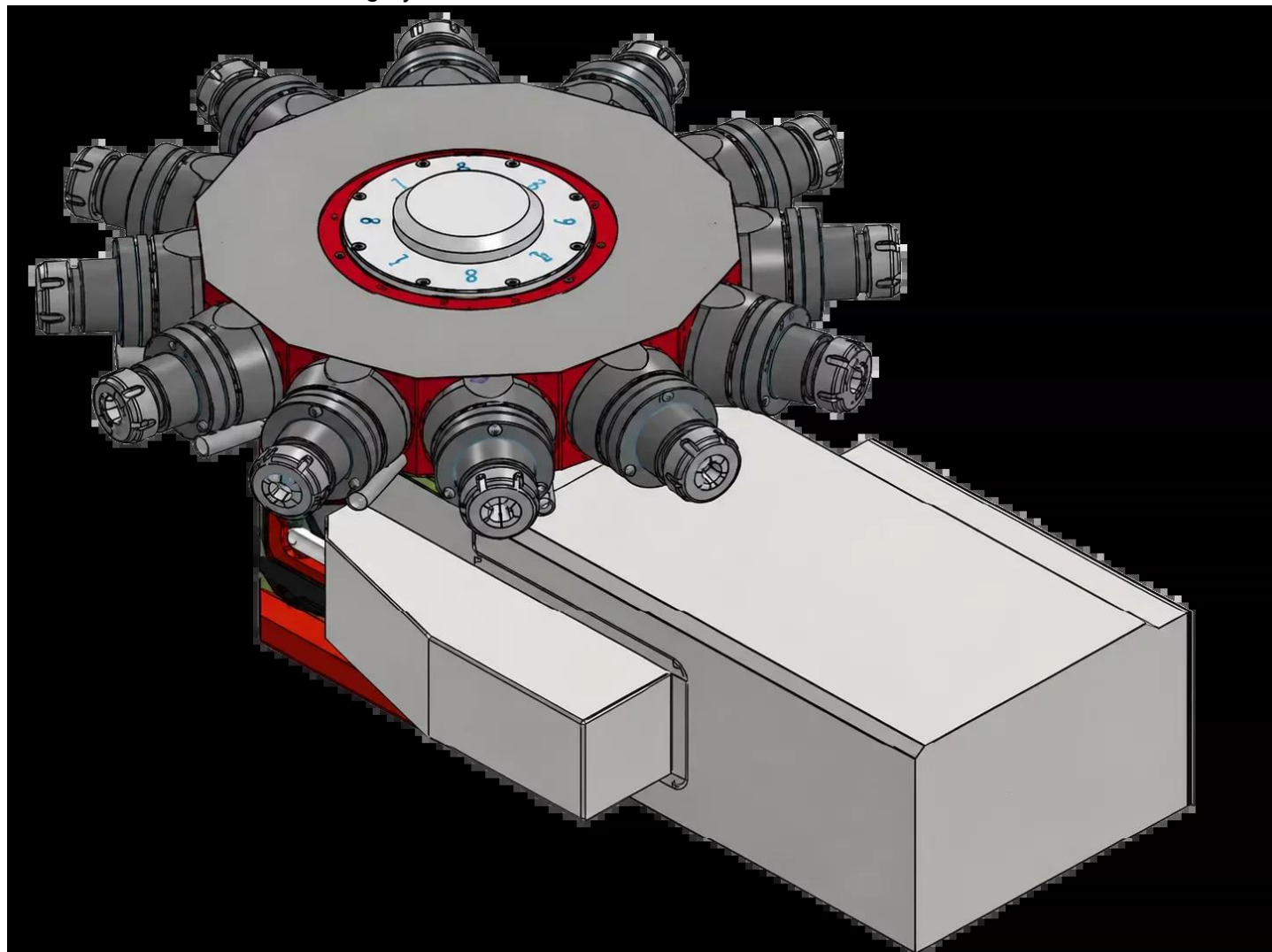
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Working Area and Tool Head

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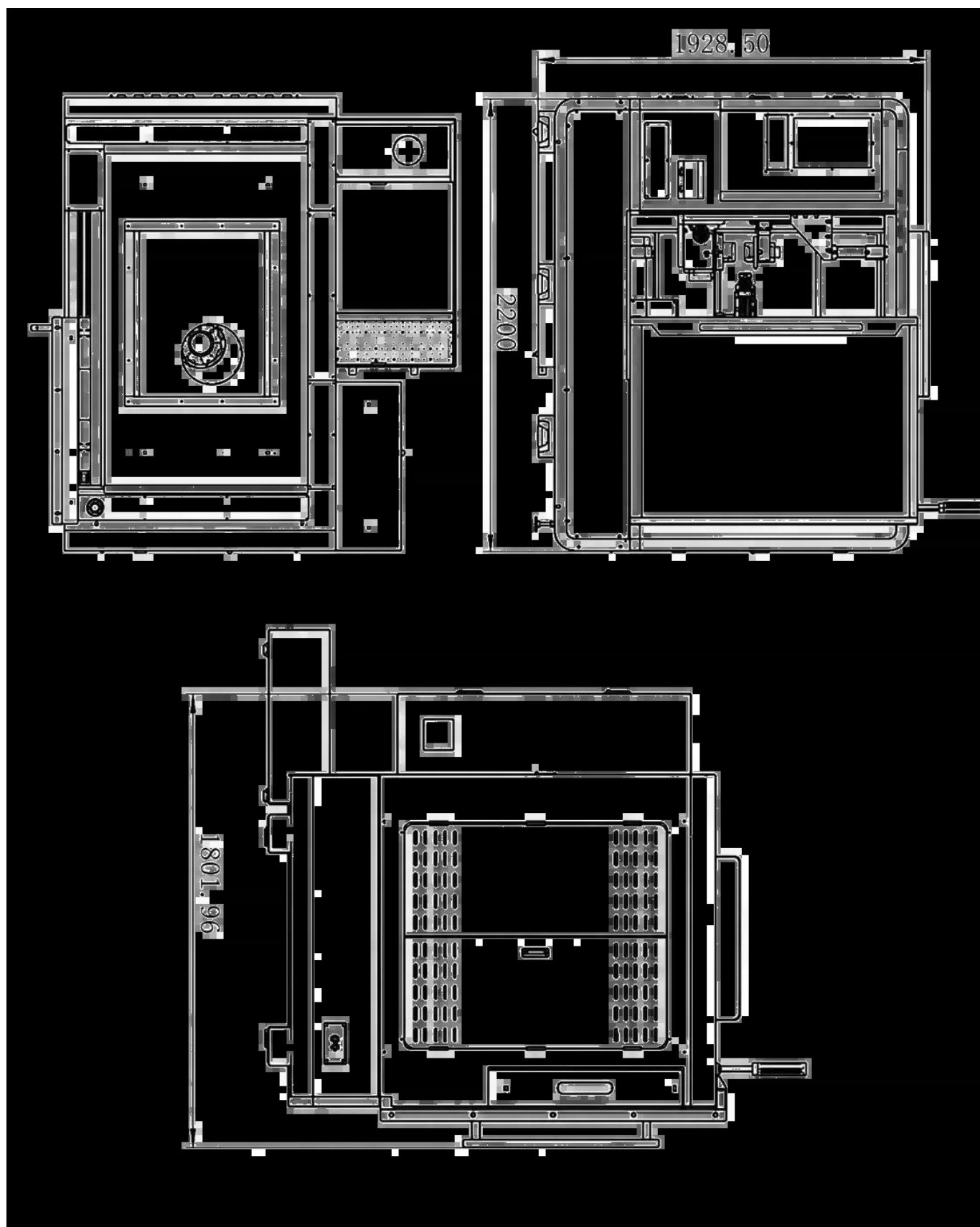


Machine Interior and Machining System



Rotary Head with 12 Spindles

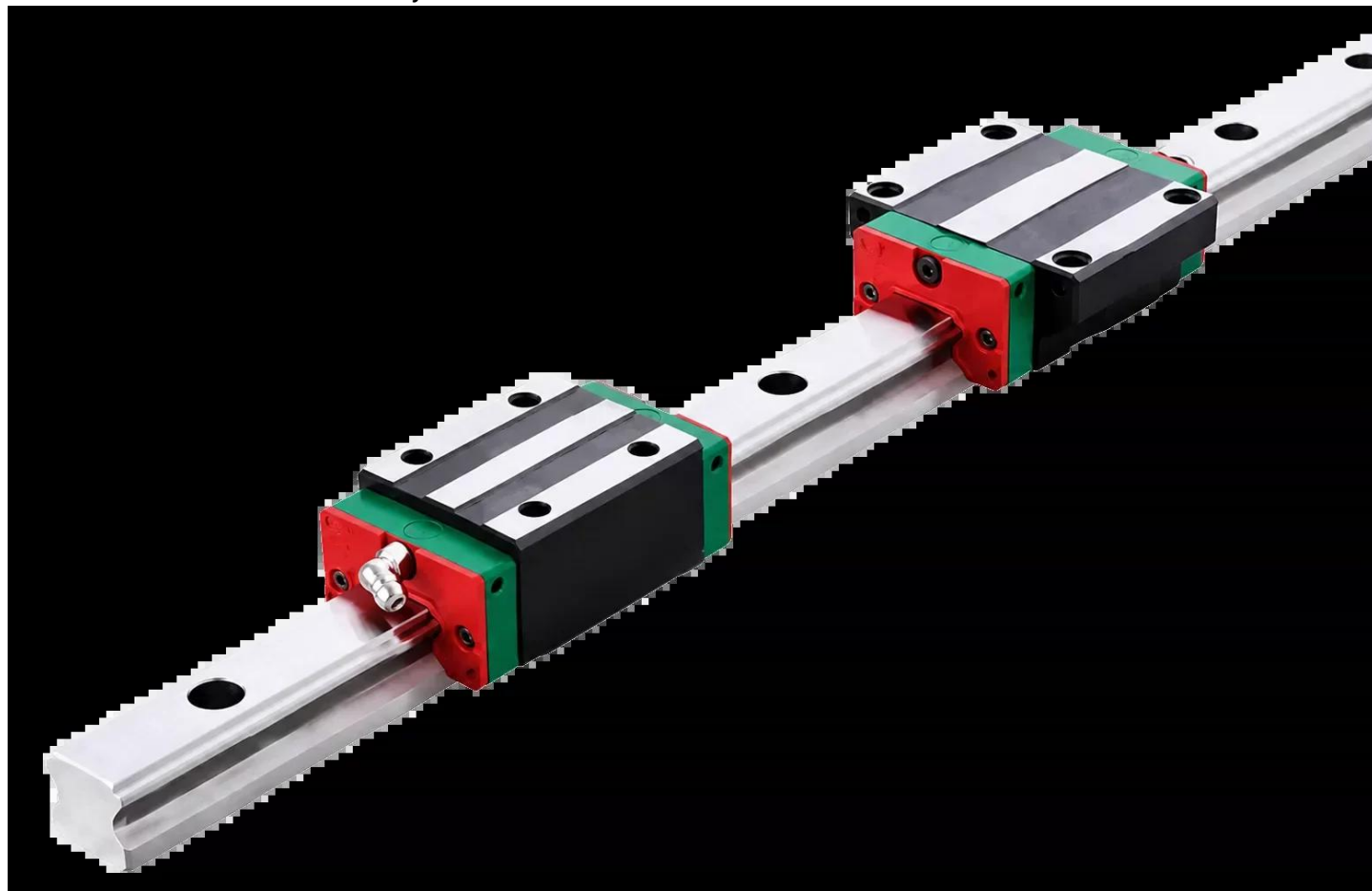
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Machine Base and Structural Layout



X/Y/Z Linear Guideways



X/Y/Z Axis Ball Screws

Key Advantages

Why Choose the Digima TA-12 CNC Centre?

HUST CNC control – high process automation, HMI interface and operator-machine interaction control.

12-spindle rotary head – fast handling of multiple operations and reduced changeover time.

Tool damage detection – a system for detecting issues, including tap breakage.

5.5 kW spindle servo motor – stable operation, frequency control and improved surface quality.

Full protective enclosure – soundproof, dustproof and waterproof construction increasing operational safety.

Automatic central lubrication – reduced maintenance requirements and stable operation of moving components.



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Positioning accuracy – X/Y/Z axis repeatability of 0.008 mm.

Serial production – the machine is adapted for serial and medium-batch work with reduced labour requirements.

Construction and Mechanics

Rigid Construction, Precision Guidance and Machining Automation

The machine base is made from cast iron, ensuring high rigidity and resistance to deformation. Following seasoning and stress-relieving annealing, the casting gains the static stability required for operation at high speeds.

The TA-12 centre features a horizontal construction with a rotary turret-head mechanism with 12 spindles and a drive gearbox. X/Y/Z guideways and screws are installed and calibrated using precision bridge straightedges and dial indicators, supporting axis-motion accuracy.

Machining heads – precise, wear-resistant working components.

Screw wear compensation – a CNC function supporting stable axis operation.

Table drive – servo drive providing high positioning accuracy.

Push-pull doors – convenient workpiece loading and unloading within the enclosed housing.

Applications

Where Is the TA-12 Drilling and Tapping Centre Suitable?

The TA-12 CNC centre is designed for serial and medium-batch production, particularly in facilities machining brass, aluminium, copper and sanitary fitting components. The machine is suitable where high repeatability, operational safety and reduced manual process handling are required.

Drilling – drilling capacity in brass up to a Ø60 mm through hole.

Tapping – maximum tapping capacity in brass up to 50 × 3 mm.



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Milling – machining of metal components and castings according to the CNC program.

Engraving – capability for machining workpieces requiring repeatable accuracy.

Sanitary fittings – machining castings and components made of brass, copper and aluminium.

Industrial production – stable operation in serial and medium-batch processes.

Axis and Machining Parameters

Operating Ranges and Main TA-12 Machining Parameters

Maximum Base X-Axis Travel **350 mm** – **3210 ball screw, RGH30 roller guideway**

Maximum Y-Axis Travel **400 mm** – **3210 ball screw, RGH30 roller linear guideway**

Maximum Z-Axis Travel **300 mm** – **3210 ball screw, RGH30 roller guideway**

Maximum X/Y/Z Axis Rapid Traverse Speed **30 m/min**

X/Y/Z Axis Position Repeatability Accuracy **0.008 mm**

Rotary Head **12 spindles**

Spindle Servo Motor Power **5.5 kW**

Spindle Speed **0–3000 rpm**

Spindle Interface **ER40**

Drilling Capacity in Brass **Ø60 mm Through Hole**

Maximum Tapping Capacity in Brass **50 × 3 mm**

Tool Change Time in Spindle Turret **0.8 seconds / 180°**

Tool Change Motor **750 W** – **tool-change servo mechanism**

Table Dimensions **300 × 300 mm**

Rotary Fourth Axis **YT200R**

Technical Specifications

Digima TA-12 Technical Parameters

Model **TA-12**

Machine Type **CNC Drilling and Tapping Centre**

Control System **CNC HUST, Tajwan**

Applications **Serial and medium-batch production, metal components, brass, aluminium, copper, sanitary fittings**

Machine Dimensions **2200 × 1765 × 1922 mm** – **with machine enclosure**

Machine Weight **3500 kg**

Total Machine Power **15 kW**

Maximum Tool Length from Spindle Nose **200 mm**



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Maximum Milling Cutter Diameter in Rotary Head **120 mm**
Full Protective Enclosure **Soundproof, dustproof and waterproof**
Working Doors **Push-pull sliding type**
Lubrication **Automatic central lubrication**
Safety **Full enclosure, alarms and process monitoring**
Condition **New**
Brand **Digima**
Fourth Axis

Fourth Axis Technical Parameters

Centre Height **135 mm**
Working Plate Diameter **170 mm**
T-Slots on Plate Surface **4–12**
Gear Ratio **1:36**
Maximum Rotational Speed **80 rpm**
Permissible Cutting Torque **35 kg/m**
Clamping Force **20 kg/m²**
Locking Torque **35 kg/m**
Indexing Accuracy **20 s**
Repeatability Accuracy **4 s**
Permissible Weight **140 kg**
Machine Configuration

Main TA-12 Components and Equipment

CNC System **Taiwan HUST – 1 set**
Servo Motors **HUST – 5 sets, including 3 brake motors**
Spindle Servo Motor **Alpha 5.5 kW – 1 set**
Electrical System **Shihlin contactor, Omron relay, Meanwell switching power supply, transformer**
Ball Screw **Hiwin – 3 pcs., 10 mm thread pitch**
Linear Rail **Hiwin – 6 pcs.**
Hydraulic System **CML – 1 set**
Chip Removal **Spiral chip removal**
Pneumatic Components **Taiwan Airtac**
Power Switch Button **Schneider**
Contactors and Relays **ABB**
Power Circuit Breaker **Delta**
Commercial Information



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Transport, Commissioning, Training and Warranty

*The machine price does not include transport, initial commissioning or operator training. These services are priced individually depending on the destination, number of operator working hours and other necessary processes. The declared delivery time according to the offer is approximately 2–3 months.

12-month warranty — the machine is covered by the manufacturer's warranty, excluding consumable parts.

CE compliance — the machine complies with European safety requirements.

Operator training — includes operator instruction and handover of machine and control-system manuals.

Commissioning — a service engineer sets up and adjusts the machine, checks operation and issues an acceptance report.